

HIGH - END ELECTRONICS BORN IN ITALY

Unico Nuovo

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USER MANUAL

Congratulations on your purchase of a *Unison Research* - A.R.I.A. Advanced Research In Audio S.r.l. audio component.

Every *Unison Research* product is the result of our extensive electronic design experience and of the deep knowledge of vacuum tubes and the way to obtain the best performances from them we have gained over the years.

It also express our passion for building unique and valuable pieces of audio equipment in which traditional craftsmanship and advanced electronics join together in harmony.

Our products are built using the finest components and materials. Each one is carefully inspected at various stages of the production process and finally tested to satisfy our own high reliability and quality standards.

Please read and observe all warnings and instructions in this owner's manual and all those marked on the unit to get the best performances from your new *Unico Nuovo* for many years to come.

1. UNPACKAGING

Please make sure that the packaging is undamaged and the product has not suffered from rough handling during transportation, otherwise we highly recommend to contact your Authorised Dealer for advice before proceeding to install the unit.

Carefully remove your CD player and all the accessories from the carton.

Inside the package you'll find:

- 1 *Unico Nuovo* amplifier
- 1 power supply cable
- 1 user manual
- 1 remote control handset

<u>IMPORTANT</u>! After unpacking please allow some hours before operating the device in order to let it adapt to the room temperature. This time is needed to prevent any possible damage due to the condensation which can eventually form during transportation. Please note, that condensation can form every time the amplifier is moved from a cold to a warm place.

Keep all packing materials: every time you will need to transport the *Unico Nuovo*, its original purpose-designed carton will provide the safest packing.

2. INSTALLATION

The *Unico Nuovo* should be positioned in a safe place on a plane surface.

Adequate clearance must be left above and around the device to guarantee a correct ventilation.

We also suggest to leave enough free space behind your *Unico Nuovo* to allow the connecting cables sufficient room to bend without crimping or strain, and we strongly recommend not to place the device directly on a power amplifier top surface or, in general, close to a heat source.

3. CONNECTION TO THE MAINS

The *Unico Nuovo* is set at the factory to the appropriate mains voltage of the country it will be shipped to.

IMPORTANT! The voltage setting may not be changed.

Never connect the *Unico Nuovo* to AC mains if the local voltage doesn't match the value indicated on the rear panel!

The mains fuse is located in the fuse-holder integrated in the IEC mains socket.

IMPORTANT! Always replace fuses with new ones of the same type and value.

4. OPERATION

SWITCHING-ON AND WARM-UP

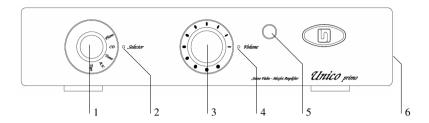
<u>WARNING!</u> Switch on the *Unico Nuovo* only after all the connections have been made and checked.

Before switching on, ensure that the volume control is at zero (fully anti-clockwise), and allow it to remain in that position until the initial automatic start-up phase is complete.

Just after switching on *Unico Nuovo* automatically starts a *warm-up* phase, the LEDs placed on the front panel near the input selection and volume knobs blink. In this status output stages are disabled, however with an input source a weak signal can be heard through the loudspeakers.

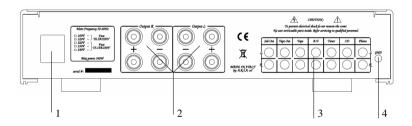
The working temperature for the tubes is reached less than 30 seconds after switching on but best results will be obtained after approximately 10 minutes from switch-on.

FRONT PANEL



- 1) SELECTOR KNOB
- 2) INPUT LED
- 3) VOLUME KNOB
- 4) VOLUME LED
- 5) IR RECEIVER
- 6) MAIN SWITCH (ON THE SIDE)

REAR PANEL



- 1) MAINS PLUG
- 2) OUTPUT CONNECTORS
- 3) LINE-LEVEL INPUT AND OUTPUT CONNECTORS
- 4) GROUND CONNECTION

The *Unico Nuovo* has two LEDs which provide the user with important information about the operating condition of the amplifier.

INPUT LED and VOLUME LED on:

indicates normal operation

INPUT LED and VOLUME LED blinking (fast):

indicates automatic start-up phase (approx 30 seconds)

INPUT LED and VOLUME LED blinking (slow):

indicates intervention of the thermal protection device, power stage is switched off.

When the internal temperature has returned to normal the amplifier will switch on automatically and repeat the initial start-up phase. It is advisable to switch off if the amplifier if the thermal protection device intervenes. This will speed up return to normal operation.

INPUT LED on and VOLUME LED blinking:

indicates that the amplifier is receiving a signal from the IR remote control (volume changing).

If there is a temporary loss of mains electricity (even of very short duration) the amplifier will restart in automatic start-up mode.

REMOTE CONTROL

Unison Research® amplifiers are supplied complete with infrared remote control.

Your remote control handset is fitted with a battery type CR2032 - 3V (lithium battery).

<u>IMPORTANT</u>! The use of the remote control with *Unico Nuovo* allows only volume control by acting on Vol- e Vol+ buttons.

PHONO BOARD

Inside the *Unico Nuovo* there is a dedicated phono board. This consists of two active gain stages for each channel and a RIAA equalisation stage which is active for the low frequencies and passive for the high frequencies. This solution is the result of extensive listening tests, and provides an excellent combination of deep, well-controlled bass and clear, sweet treble.

This phono board is able to interface with both MM and MC cartridges.

Movable links on the board (two for right channel and two for left channel) enable this adjustment to be carried out. The relative positions are clearly marked MM and MC.

Two further movable links fitted to the phono board allow the level of gain (amplification) to be changed by +/-10dB. In practice, MM cartridges having an output lower than 4mV and MC cartridges having an output lower that 0.5mV will probably require these links to be set at the +10dB position.

5. FUSES

Inside the *Unico Nuovo* there are six fuses.:

 F_1 , $F_2 = 1AT / 250V$ F_3 , $F_4 = 1,6AT / 250V$ F_5 , $F_6 = 5AF / 250V$

The value for the main fuses is: 6,3AT / 250V for 100V/120V mains voltage 3,15AT / 250V for 220V/230V/240V mains voltage

These fuses are all 5 x 20mm glass fuses. If one of these fuses should blow we advise you to consult your Authorised Dealer or Service Centre for advice.

6. SAFETY AND MAINTENANCE

Never operate the device with either the bottom or top covers removed.

Do not open the amplifier!

There are no user serviceable parts inside. For technical assistance or product service please refer to your Authorised Dealer or to a Unison Research® authorised Service Centre.

Do not spill liquid into the amplifier!

If liquid should be accidentally spilled into the amplifier remove the mains plug from the wall socket immediately and seek assistance from an authorised Service Centre before attempting to operate it again.

Before inserting the mains plug into the wall socket ensure that the switch on the amplifier is in the "OFF" position.

Valve replacement should be carried out using only valves of the same type and matched in pairs.

The *Unico Nuovo* uses two valves type ECC83 (12AX7). The amplifier has been designed for maximum valve life: in laboratory tests 1500 hours life have been exceeded.

IMPORTANT!

Before attempting valve replacement make sure that the amplifier is switched off and remove the mains power cord from the amplifier. If in doubt your Authorised Dealer or Service Centre will be able to assist with this operation.

Cleaning the *Unico Nuovo*.

Cleaning has to be done after switching off the device and allowing the amplifier to cool down. Use a soft dry cloth. Do not use solvents or alcohol-based detergents. Do not rub hard on the screen-printed legends.

Never operate the amplifier when covered! Adequate ventilation is essential at all times!

7. TECHNICAL SPECIFICATIONS

Power output: 85W RMS on 8Ω both channels driven

Frequency response: -0.1dB @ 10Hz / -0.5dB @ 100kHz

Input impedance: $47k\Omega // 47pF$ Sensitivity: 260mV RMS Input stage: Pure Class A.

Parallel ECC83/12AX7 (2x)

Output stage: Dynamic Class A

POWER MOSFET in complementary pair

Inputs: 5 line RCA (1 phono optional)

Line outputs: 1 tape, 1 sub (volume controlled)

Output connectors: 4 + 4 bi-wiring

Feedback factor: 10dB

THD: < 0.15% @ 1kHz, 10W

Power consumption: 380W max

Dimensions: 17.1in x 3.5in x 17in

Weight: 31lb

PHONO STAGE (optional)

Input impedance: $47k\Omega // 220pF MM$

 100Ω // 440pF MC

Gain: 40dB MM, 50dB MC

Gain setting: +0dB / +10dB Max input voltage: 120mV @ 1kHz

RIAA: active at low frequency,

passive at high frequency

THD: 0.09% @ 5mV, 1kHz, MM